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Submitting Organization

BASF CORP

Contractor

Document Title

LETTER FROM BASF CORPORATION SUBMITTING SAFETY DATA SHEET ON BENZENE, 1,3-DIISOCYANATOMETHYL- WITH COVER LETTER DATED 082493

Chemical Category

BENZENE, 1,3-DIISOCYANATOMETHYL- (26471-62-5)

Section 8d

BASF Corporation

BASF

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Document Processing Center (TS-790)
Office of Pollution Prevention and Toxics
U. S. Environmental Protection Agency
401 M Street SW
Washington, D.C. 20460

Ladies and Gentlemen:

Attention: Health and Safety Reporting Ru
Chemical Name: Benzene, 1,3-diisocyanatomethyl-
Trade Name: Lupranat T 80
(CAS Reg. No. 26471-62-5)

In compliance with the subject rule, BASF Corporation is submitting a new Material Safety Data Sheet for Lupranat T 80 which was recently received from our parent company, BASF Aktiengesellschaft, Ludwigshafen, Germany. The MSDS contains the following health and safety data on the above mentioned chemical: acute toxicity, subacute-chronic toxicity, and ecotoxic effects.

Submitting Site: BASF Corporation
8 Campus Drive
Parsippany, NJ 07054

Submitting Official: Carol E. Sunman
Products Regulations Specialist
1609 Biddle Avenue
Wyandotte, MI 48192-3799

Please contact me at (313) 246-5121 if you have any questions.
No claims of confidentiality are being made for this submission.

Sincerely,

BASF CORPORATION

Carol E. Sunman

Carol E. Sunman
Product Regulations Specialist

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Enc.

1609 Biddle Avenue, Wyandotte, Michigan 48192 (313) 246-6100

1. Trade name:

LUPRANAT* T 80 USA

Company:
BASF Aktiengesellschaft
HUM/E
D-67056 Ludwigshafen
Tel.: 0621-60-49924

Emergency information:
Fire-brigade BASF Ludwigshafen
Tel.: 0621-6043333 Fax : 0621-6092664

2. Composition/information on ingredients

Chemical nature:
mixture of: 4-methyl-m-phenylene diisocyanate,
toluene-2,6-diisocyanate, 80:20
CAS-No. 26471-62-5 EINECS-No. 247-722-4

3. Possible hazards

Critical hazards to man and the environment:
R23 - Toxic by inhalation.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R42 - May cause sensitization by inhalation.

4. First aid measures

General advice: Immediately remove contaminated clothing.

If inhaled: Keep patient calm, remove to fresh air, summon medical help. Symptoms can appear later.

On skin contact: Wash thoroughly with soap and water.

On contact with eyes: Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion: Immediately rinse mouth and then drink plenty of water, do not induce vomiting, summon physician.

Note to physician: Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer dexamethasone aerosol to prevent pulmonary odema.

5. Fire fighting measures

Suitable extinguishing media: dry extinguishing media, foam, carbon dioxide (CO2), large amounts water spray.

The following can be given off in a fire:
carbon monoxide, carbon dioxide (CO2), nitrogen oxides, hydrogen cyanide, toluene-2,6-diisocyanate, 4-methyl-m-phenylene diisocyanate.

Special protective equipment:
Wear self-contained breathing apparatus and protective suit.
Fire/explosion fumes should not be inhaled.

Further information:
Keep containers cool by spraying with water if exposed to fire.
Gaseous products of degradation can be given off if the product is greatly overheated: decomposition, risk of bursting.
Dispose of fire debris and contaminated extinguishing water in accordance with local regulations. Collect separately contaminated extinguishing water, do not allow to reach sewerage or effluent systems.

6. Accidental release measures

Personal precautions:
Pick up immediately as product renders floors slippery. Ensure adequate ventilation. If gases/vapours are formed. full chemical-protection suit respiratory protection.

Environmental precautions: Do not let product enter drains.

Methods for cleaning up:
Large spillages should be dammed-off and pumped into containers; soak up remainder with absorbent material and dispose of in accordance with local regulations. Small amounts: cover with sand sweep up and then dispose of. Do not keep container sealed. Danger of bursting when sealed gastight.

Recommended cleaning material: preparation of water, wetting agent (1 %).

7. Handling and storage

Handling
Ensure suitable air extract/ventilation during cleaning/emptying of process machinery. Ensure thorough ventilation of stores and work areas. Processing machines must be fitted with local exhaust ventilation. Avoid breathing vapour/aerosol.
If gases/vapours are formed when applied by spraygun, when molten product is handled, at elevated temperature: breathing protection required.

Protection against fire and explosion: Keep away from sources of ignition - No smoking.

Storage
Keep tightly closed in a dry, cool and well-ventilated place. If moisture enters isocyanate containers CO2 forms and the pressure builds up. Do not store together with: acids, amines or products containing amines, substances that contain groups with active hydrogen. Stow/store/load separately from food, feed and consumable items.

Storage temperature: max. 30°C; storage temperature: min. 15°C.

8. Exposure controls and personal protection

Additional information on the lay-out of technical plant
(see 7)

Components with workplace control parameters:
toluene-2,6-diisocyanate MAK: 0,01 ml/m3 = 0,07 mg/m3 (Germany)

Personal protective equipment

Respiratory protection: if breathable aerosols/dust are formed, if ventilation is inadequate, when sprayed, when applied by spraygun, if the MAK value is exceeded (Germany), at elevated temperature: self-contained breathing apparatus recommended.

Hand protection: impermeable gloves (synthetic rubber), polybutadiene, (polyacrylonitrile).
Not to be used: protective gloves (PVC), polyethylene.

Eye protection: tightly fitting safety goggles.

Body protection: safety shoes, one-piece work clothes.

General safety and hygiene measures: Keep away from foodstuffs, animal feedstuffs and beverages. No eating, drinking, smoking or snuff-taking at the place of work. Avoid contact with the skin, eyes and clothing. Immediately remove contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied.

9. Physical and chemical properties

Form: liquid
Colour: colourless - light yellow
Odour: characteristic, pungent

Change in physical state		
Melting point/melting range:	11-14 °C	(DIN)
Boiling point/boiling range:	250 °C	(DIN)
Flash point:	135 °C	(DIN 513 76)
Combustibility:		
Explosion limits:		
- lower	0.9 Vol.%	
- upper	9.5 Vol.%	
Ignition temperature:	> 600 °C	(DIN)
Self-ignition temperature:	- °C	ASTM E 659
Self ignition:		
Explosion hazard:		
Fire promoting properties:		
Vapour pressure: (25 °C)	< 0.03 hPa	(DIN)
Density: (25 °C)	1.22 g/l	
Bulk density:	- kg/m3	

Solubility in water: n.a. = not applicable
Reacts slowly with water at the interface and liberates CO2 to form an insoluble polyurea with a high melting point.

pH value: n.a. = not applicable

Octanol/water partition coefficient (log POW): n.a. = not applicable

Viscosity: (25 °C)	3-6 mPas	(DIN 51 550)

Other information: none

10. Stability and reactivity

Conditions to avoid: To avoid thermal decomposition, do not overheat. Starts to decompose at 230°C. If moisture enters isocyanate containers CO2 forms and the pressure builds up.

Substances to avoid: acids, water.

Hazardous reactions: hazardous reaction influenced by amines or products containing amines, heavy metal salts, substances that contain groups with active hydrogen.

Hazardous decomposition products: no decomposition if correctly stored and handled.

11. Toxicological information

Acute toxicity
The product contains 2,4-TDI, 2,6-TDI (80:20), to which the following data apply:

LD50/oral/rat: > 4000 mg/kg
LC50/inhal./rat: 100 ppm/ 4 h (spray)

Subacute-chronic toxicity
long-term study (2 years), application: by inhalation
Findings: When inhaled by rats, the substance causes distinct local irritation with damage to the epithelium. No evidence of carcinogenicity was found. When high toxic doses were administered orally (this is not very relevant in industrial medicine), there was a doubtful suspicion of carcinogenic effects.

Experiences in humans
Can severely irritate the eyes and respiratory tract depending upon the concentration. Prolonged exposure to the product can result in irritation of the skin and mucous membranes. Symptoms can appear later, e.g.: coughing, tightness in the chest, shortness of breath.

Sensitizing: If this substance comes into close contact with the skin of hypersensitive persons, sensitization might occur. Danger of skin sensitization on repeated contact. Can cause sensitization of the respiratory tract in allergic persons. Avoid breathing vapour/aerosol.

Experience gained at the place of work has never revealed any evidence of carcinogenic effects on humans.

Additional information:
No reports of ill effects provided product was correctly handled and processed.

12. Ecological information

Elimination information
Evaluation: Reacts slowly with water at the interface and liberates CO2 to form an insoluble polyurea with a high melting point. Experience shows this product to be inert and non-degradable.

Ecotoxic effects
Toxicity to fish: LC0 (maximum tested concentration without any mortality)/Brachydanio rerio/: > 100 mg/l/96h
toxicity to bacteria: EC/LC50 (h): > 100 mg/l (OECD 209)
toxicity to daphnae (acute): EC/LC50 (h): > 750 mg/l

Further ecological information
Do not discharge product into natural waters without pretreatment (biological treatment plant). Prevent product from entering water courses or the ground.

13. Disposal considerations

Product: Must be disposed of by special means, e.g. suitable incineration, in accordance with local regulations.

Disposal code no. for unused product: (Germany) 57202

Contaminated packaging: Contaminated packs should be emptied as far as possible, they can then be passed on for recycling after being thoroughly cleaned.

14. Transport information

Land transport

ADR/RID/GGVS/GGVE Class: 6.1 Item number/letter: 19b
Warning panel Hazard-no: 60 Substance no.: 2078
UN-No: 2078
Description of the goods: 2.4-Toluenediisocyanat

Remarks:

Inland waterway transport

ADN/ADNR Class: 6.1 Item number/letter: 21c
Category: -
Description of the goods: 2.4-Toluenediisocyanat

Remarks:

Sea transport

IMDG/GGVSee Class: 6.1 UN-No: 2078 PG: II
EMS: 6.1-02 MFAG: 370
Marine pollutant:
Proper technical name: 2.4-Toluenediisocyanate

Remarks:

Air transport

ICAO/IATA Class: 2078 UN/ID-No.: 2078 PG: II
Proper technical name: 2.4-Toluenediisocyanate

Remarks:

Other information

15. Regulatory information

Labelling according to EEC Directives
EEC-No. 615-006-00-4
contains: toluene-2,6-diisocyanate, 4-methyl-m-phenylene diisocyanate
hazard symbol: T
R-phrases:
R23 - Toxic by inhalation.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R42 - May cause sensitization by inhalation.
S-phrases:
S23 - Do not breathe vapour
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28 - After contact with skin, wash immediately with plenty of soap and water.
S38 - In case of insufficient ventilation, wear suitable respiratory equipment.
S44 - If you feel unwell, seek medical advice (show the label where possible).
Contains isocyanates. See information supplied by the manufacturer.

National legislation/regulations
TRGS 900 (Germany): toluene-2,6-diisocyanate,
MAK: 0.01 ml/m3 = 0.07 mg/m3 (Germany)
top limit category I (TRGS 900 Germany)
risk of sensitization (TRGS 900, Germany)

Information on German occupational limitations:
preventive (medical) checkup: guidelines issued by the German Berufsgenossenschaft Chemie No. G 27

German "Stoerfallverordnung": subject to German Industrial Nuisance legislation

German "Flammable Liquids" classification (VbF): none

TA Luft(Germany): Class 1, number -

Water hazard class: WGK 2 (Germany)

The appropriate BG leaflet (Germany) should be noted:
Trade association leaflet M 044, 10/87 (Germany).

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16. Other information

A backslash in the left hand margin indicates an amendment from the previous version.

The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties. Recipients of our product must take responsibility for observing existing laws and regulations.

CERTIFICATE OF AUTHENTICITY

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